the tissues, in which exsection being tried as a forlorn hope suppuration with continued fever and hectic follow, amputation should not be delayed until amyloid changes of liver and kidneys render the chances of final recovery very doubtful.

NOTES ON WRY-NECK AND ITS TREATMENT.

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THERE is a certain ambiguity about the term "wry-neck" as about many other terms in the nomenclature of disease. A name is given to a roughly defined group of symptoms, or, perhaps, to one well-marked symptom, Time and observation differentiate several distinct, perhaps vitally distinct and contrasted, pathological conditions at the bottom of different cases respectively. If a minority of cases are found to depend on a disease far more serious than the original symptom which has attracted attention, there will be a tendency to cease to view such cases after the mere symptom, and to associate them rather with other cases of the primary disease. Hence there are few surgeons who now follow the old-fashioned practice of speaking of a case of cervical caries as a form of wry-neck.

Again, when, from its comparative commonness, its intrinsic interest, and the regularity of its symptomatology, one particular pathological condition seems to demand a distinct name all to itself, it is apt to arrogate to itself exclusively the name which, in time of vague pathology, it shared with other conditions different essentially, though similar superficially.

For these reasons, contracture of the sterno-mastoid is coming more and more to be regarded as the only affection having a thorough claim to be called "wry-neck"; and even cicatricial contractions of the skin after burns, whatever may be the po-

sition in which they place the head, are now seldom granted the name in question.

Therefore, by "wry-neck" I mean contracture of the sterno-mastoid.

In certain cases wry-neck may be foreseen and prevented. When, after birth, a child is found to be suffering from an injured sterno-mastoid, the muscle should be frequently and gently rubbed by the nurse with oiled fingers, and every day its head should be, for a few minutes, slowly and gently bent away from the shoulder of the side affected, while the face is turned toward the same side. In these manipulations she should be regularly instructed and superintended by the surgeon, who should on his visits practise the movements himself.

When a wry-neck has actually developed, the sooner the sterno-mastoid is divided the better. Exceptions to this rule are rare. They occasionally present themselves in the cases of very fat infants with short necks. Instrumental treatment without myotomy is a very tedious and expensive affair, and it has seemed to me when watching it in the practice of other surgeons, to be not as effective as it has been represented. It sometimes happens that the poor child falls into the hands of some instrument maker "of the baser sort" who assures the parents that the use of an (of course costly) appliance, under his superintendence, or, perhaps, under no superintendence at all, will cure the child. Or resort is had to the bone-setter, who diagnoses a small bone out of joint in the neck. Recently I have seen a child on whose poor little head (and neck) both these calamities have fallen.

It is desirable not only to cure wry-neck, but also to cure it quickly, so as to stop without delay, as far as possible, the continuous development of asymmetry of the face, head, and even of the shoulders,—which secondary deformity is scarcely less disfiguring than the wry-neck itself.

THE OPERATION.

1. Subcutaneous Division of the Sterno-Mastoid.—Dupuytren who first divided the sterno-mastoid subcutaneously, did so by passing the knife beneath it and cutting towards the skin, and

that is the safer plan, as, if the knife should slip, it had better cut through the skin than into the vessels underlying the muscle.

Except in the case of an unruly child, distending its jugulars by screaming, crying, and struggling, anæsthesia is superfluous.

The patient lies down with the neck and shoulders raised on pillows, and the head securely held by an assistant. The tenotome and the skin should be cleansed and asepticised, especially in the practice of a general hospital, where instruments are frequently applied to purposes for which they were not originally intended, and the employment of the tenotomes and cataract knives to open small abscesses and inflamed cysts is a thing not unheard of. Supposing the tenotome to be inserted at the inner edge of the sternal head of the muscle, the surgeon should simultaneously press the end of one finger of his left hand to the other side of the same sternal head and, as it were, beneath it. With this finger he feels the point of the knife (of course through the skin), when he has insinuated the blade on its flat beneath and close to the deep surface of the muscle. When the division is made in the ordinary way with the assistant's help the snap is very marked. The clavicular origin has now to be inspected. In a considerable number of cases it is little if at all affected. If tense it should be divided in a similar manner to that already indicated for its sternal head. Care must be taken to avoid the anterior external jugular.

When both heads of the muscle have been divided, if, as sometimes happens, other bands spring into reach and prevent reduction of the deformity, we are told to go on cutting them subcutaneously. I have shrunk from doing so. On the contrary, following Volkmann I make an open wound and see what I am doing, working antiseptically

2. Open Division of the Sterno-Mastoid.—The muscle itself or any part of it can be divided openly. The skin, fascia etc., should be incised perpendicularly for about two inches and the edges pulled apart with retractors. The prominent and comparatively superficial muscular and fibrous structures may be divided without ceremony, but as the deeper parts are ap-

proached, while an assistant keeps the wound perfectly clean and dry with thorough sponging, the operator should rather scratch with the point of his knife or *nibble*, as it were, with the points of a pair of scissors until he has divided every obstructive and tense fibre. If he went too far it would be possible that he might puncture one of the large vessels; that, however, would be very unlikely with the method I am recommending; and it is inconceivable that he could accidentally *nibble* a *large* hole in the jugular.

But, whatever operation one may be doing, it is necessary in order that one may go about it coolly, happily, and with never failing presence of mind, to be prepared for the worst. Therfore, whenever I am operating near the great veins of the neck I always have at hand a jug of pure warm water and a supply of iodoform gauze. Were there any sign of air entering a vein I should fill the wound with the former according to the plan recommended by Mr. Treves. If one of the jugulars should be punctured, probably a compress of iodoform gauze would be the handiest and most satisfactory thing to which to resort.

I use a small drainage tube, removing it about the fourth day. The skin should be sutured carefully with a view to preventing an ugly scar. Whatever antiseptic dressings are used, they should be made snug by the free use of good strapping, and if they are to be kept in place, it is essential to fix the head and neck from the first with some form of appliance.

When Dupuytren had done the first subcutaneous section of the sterno-mastoid, he fixed the patient's hand to her foot of the same side, just as in the lithotomy position. I am not aware that any one since has applied counter extension to the arm either in this or in any other way. And yet it seems a rational plan. I was not acquainted with Dupuytren's method, which has the advantage of being simple, though, perhaps, rather irksome, when I contrived and practised the mode of extension which I am about to describe and recommend.

Extension and counter-extension are made by weights attached by adhesive strapping to the head and upper arm respectively. From a wooden yoke or stirrup above the head, passes down on each side a piece of strapping which covers the correspond

ing side of the head, the parotid and mastoid regions and the neck to just below the level of the jaw, but does not reach its fellow of the opposite side below the chin. A hole is cut on each side just large enough to let the ear through. A narrower circular band of strapping encircles the head immediately above the ear and eyebrows. Strapping of the best quality must be used.

The weight extension is applied to the upper arm exactly in the same manner as that in which it is affixed to the leg for the treatment of hip disease by extension. The patient is left free to use it, and generally holds it spontaneously in the flexed position.

Commencing with four pounds each, both the two weights should be gradually increased until in a week they equal seven pounds each or more, if an increase of weight can be borne and appears to have any beneficial effect. Of course, regard must be had to the size and strength of the child. It is worth while to keep up this weight extension for a month. A fortnight after operation manipulations may begin, the weights being temporarily removed for that purpose.

When the weight extension is given up, the manipulations must be regularly continued for some months more. When they are at last dispensed with, the patient should be occasionally seen, and at the least sign of relapse, manipulations should be recommenced.